REMARKS

Applicant's attorney would like to thank the Examiner for the careful consideration given to this case as well as the courteous interview extended to the undersigned on July 9, 2003. As was discussed and agreed upon, the claims have been amended to focus on the limitation of claims 12-18 and Applicant will pursue other claims in a continuation application. In light of the points raised during the interview and the remarks presented *vide infra*, it is respectfully submitted that the claims are now in condition for final allowance and notice to such effect is respectfully requested. As was agreed upon during the interview, an indication of final allowance is respectfully requested.

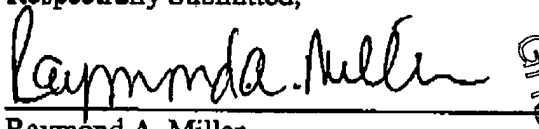
Claims 1-38 stand rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 6,114,038, ('038), to Castro et. al in view of a reference to Korgel et. al. J. Phys. Chem. 1996, 100, 346-351 ("Korgel"). It is the Examiner's position that the present claims would be obvious in view of Castro's teaching of functionalized fluorescent nanocrystals, method of preparation, and uses thereof, in view of Korgel's purported teaching of using liposomes such as phosphatidylcholine to grow fluorescent nanocrystals. The Examiner emphasizes that the Korgel reference teaches that growth of nanocrystals in surfactant bilayer vesicles (e.g. liposomes) may provide a more rationally based method to produce particles of predetermined size, shape and crystallinity. As was discussed during the interview, Applicant maintains that the Examiner has inappropriately combined the references. However, due to the late nature of the prosecution, the interview focused on claims 12-18 relating to the surface groups associated with the liposomes of the present invention. Accordingly, the present remarks will focus on the inapplicability of the same.

With regard to claim 1 and claims 12-18 which depend therefrom, it is respectfully submitted that the Examiner cannot make the argument that it is appropriate to combine Castro and Korgel to arrive at Applicant's invention. It is respectfully submitted that while an argument can be made that at some point in time Korgel suggests a nanocrystal encapsulated in a liposome, it must be limited to that expansive teaching. While Korgel may be directed to creating a vesicle that is used for growing fluorescent nanocrystals, Korgel makes no mention of functionalizing the vesicle. The vesicle is used only for the growth of the nanocrystal. Conversely, Castro does not teach functionalizing a vesicle or liposome because there is no vesicle or liposome present in Castro. It is axiomatic to say that the combination of

Castro and Korgel arrives at the Applicant's invention. This is due to Castro having no liposome and Korgel only uses the liposome to grow the nanocrystal. Accordingly, it is respectfully submitted that claim 1 and 12-18 be immediately passed to issue.

In view of the remarks presented above, and the agreement reached during the interview, it is respectfully submitted that all of the claims are in condition for final allowance and notice to such effect is respectfully requested. Although Applicant believes no fees are due, the Commissioner is hereby authorized to charge deposit account No. 50-0436 for any fees that may be due in connection with this response. Should the Examiner have any questions regarding these remarks, the Examiner is invited to initiate a telephone conference with the undersigned.

Respectfully Submitted,



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1. (original): A functionalized, encapsulated fluorescent nanocrystal comprising:

a liposome;

one or more fluorescent nanocrystals encapsulated by the liposome; and surface groups wherein an outer surface of the liposome comprises the surface groups, and wherein the surface groups are selected from the group consisting of one or more reactive functionalities, one or more affinity molecules, and a combination thereof.

2.-11. Withdrawn

12. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the surface groups comprise an affinity molecule comprising a monoclonal antibody.

13. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the surface groups comprise a reactive functionality coupled to an affinity molecule comprising a monoclonal antibody.

14. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the surface groups comprise an affinity molecule comprising a nucleobase.

15. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the surface groups comprise a reactive functionality coupled to an affinity molecule comprising a nucleobase.

16. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the surface groups comprise an affinity molecule comprising a nucleic acid molecule.

17. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the surface groups comprise a reactive functionality coupled to an affinity molecule comprising a nucleic acid molecule.

18. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1, wherein the liposome is comprised of one or more cationic lipids and one or more helper lipids in forming a liposome adapted for transfection.

19.-38. withdrawn